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(54) Title: **NUCLEIC ACID SEQUENCES ENCODING AND COMPOSITIONS COMPRISING IgE SIGNAL PEPTIDE AND/OR IL-15 AND METHODS FOR USING THE SAME**

(57) Abstract: Fusion proteins and nucleic acid molecules encoding fusion proteins are disclosed. Fusion proteins comprising non-IL-15 signal peptide linked to IL-15 protein sequences and fusion proteins comprising an IgE signal peptide linked to non-IgE protein sequences are disclosed. Vectors comprising such nucleic acid molecules; and to host cells comprising such vectors are disclosed as well as recombinant vaccines and live attenuated pathogens encoding fusion proteins, and methods of using the same, are disclosed. The immunomodulatory effect following delivery of IL-15 and CD40L, with or without immunogens, is disclosed as are various nucleic acid molecules and compositions thereof used for delivering such proteins and methods of using such compositions.

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